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**EP A2 0038024**

**GB 1416195**

**GB 1014994**

**US 3891085**

(58) Field of search

**B8D**

**B8T**

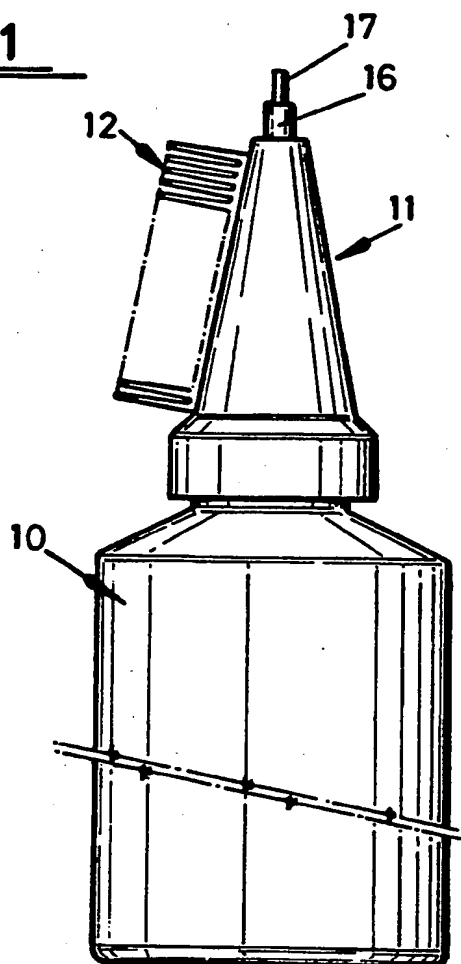
**A4K**

**Selected US specifications from IPC sub-class B65D**

(54) **Container with closure and spreader**

(57) An appliance for use in dispensing a preparation for treating the hair, eg hair mousse, comprises a squeeze container 10 having a screw-on closure 11, either the container or the closure incorporating comb teeth or bristles 12 for spreading the preparation through the hair. The closure preferably defines a dispensing or discharged nozzle 16, which nozzle may be a duct through the comb teeth (12a, Fig. 3). Alternatively, outlet ducts in the closure may be disposed adjacent the root portions of the teeth (Figures 4, 5) and a groove may be provided for each tooth for carrying the liquid along the length of the tooth. The teeth may be moulded integrally with the closure or independently therefrom from porous plastics material and inscribed through the closure such that the liquid is conducted along the teeth by capillary action.

**FIG. 1**



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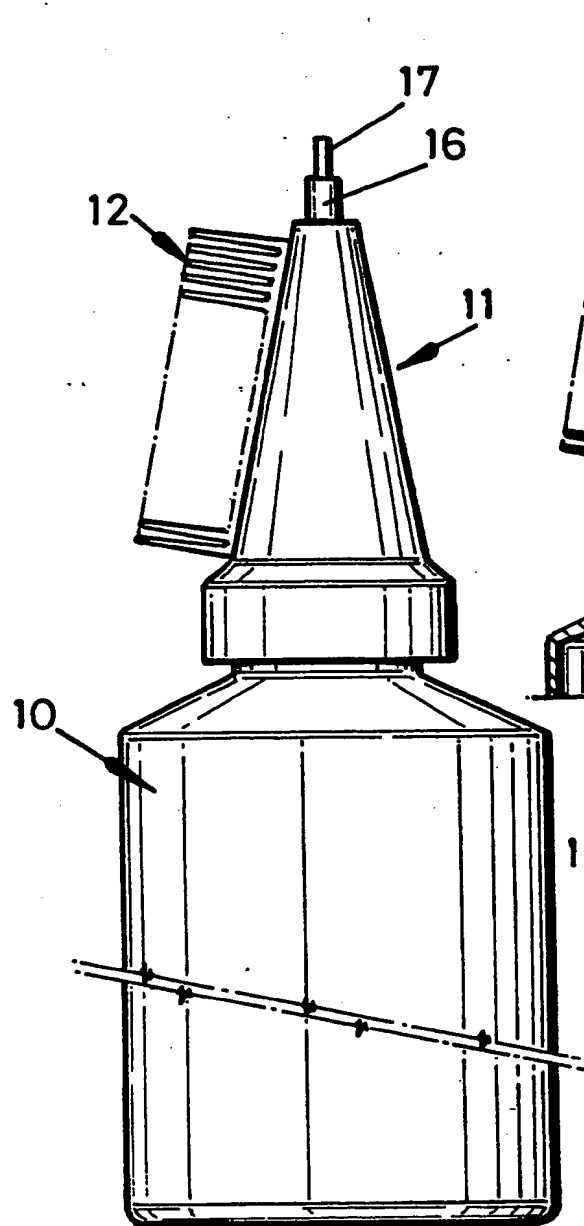


FIG. 1

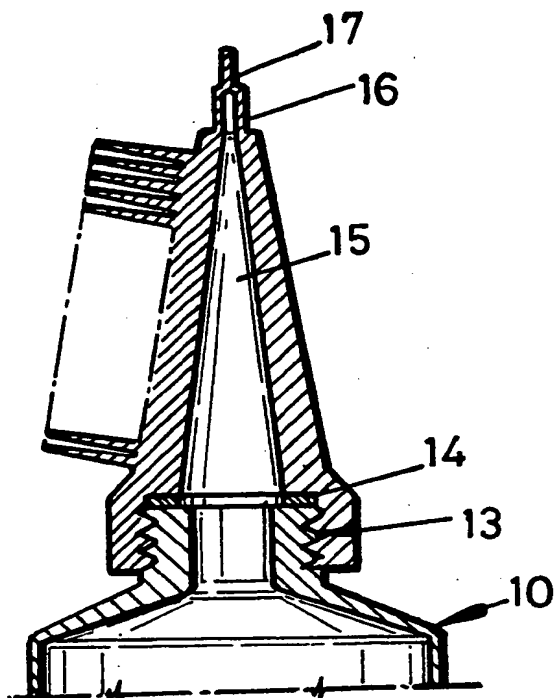


FIG. 2

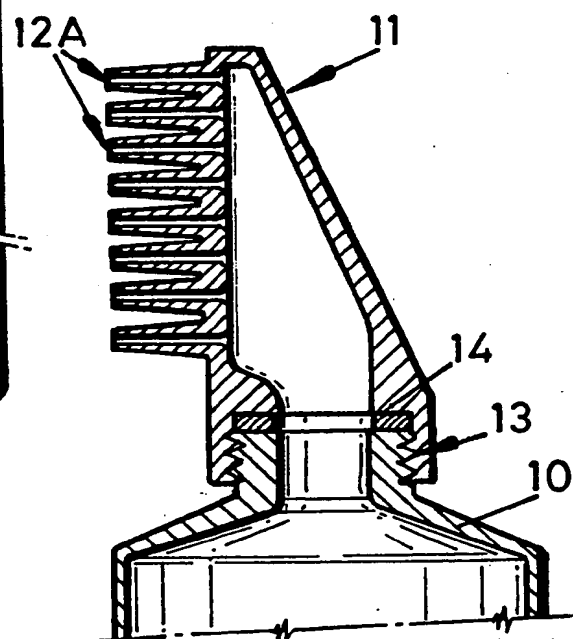


FIG. 3

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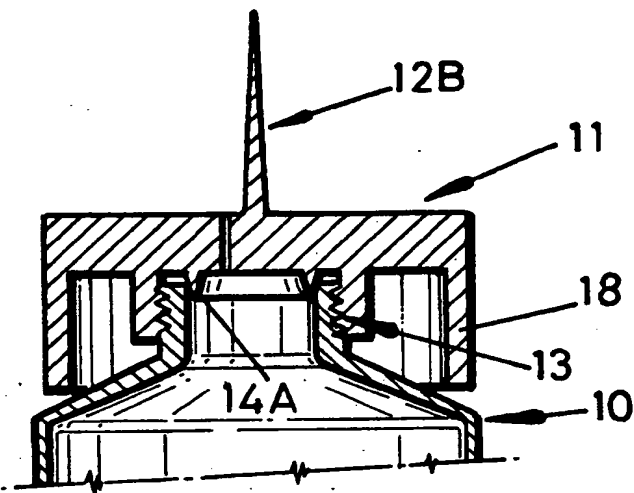


FIG. 4

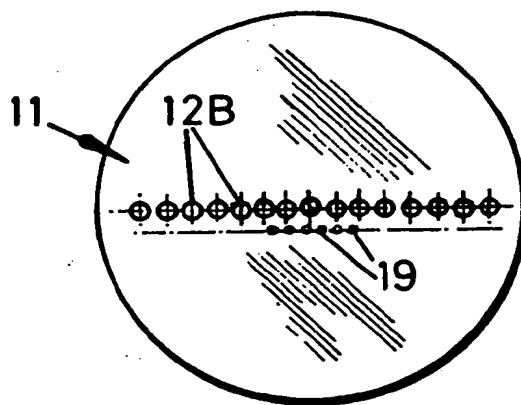


FIG. 5

## SPECIFICATION

## Dispensing appliance for hair treatment preparations

This invention relates to appliances for use in dispensing preparations for treating the hair.

According to the present invention there is provided an appliance for use in dispensing a preparation for treating the hair comprising a container for holding the preparation, a closure on the container closing same to retain the preparation, and spreading means on the container or in the closure for spreading a preparation through the hair. Preferably, the spreading means comprises comb teeth or bristles.

By providing the spreading means on the container or closure, it becomes possible to achieve significant economy in manufacture of the appliance since the spreading means and the container or closure can be produced simultaneously instead of as separate items as is conventional. Also, in practice, the said preparation can immediately and conveniently be spread through the hair following discharge from the container. Embodiments of the invention will now be described, by way of example, with reference to the accompanying drawings in which:-

Figure 1 is an elevational view of an appliance in accordance with the present invention;

Figure 2 is a sectional elevation of part of the appliance of Fig. 1;

Figure 3 is a sectional elevation of part of a modified appliance in accordance with the present invention;

Figure 4 is a sectional elevation of part of a second modified appliance in accordance with the present invention; and

Figure 5 is a plan view of the closure shown in Fig. 4.

In Figs. 1 and 2, an appliance for use in dispensing a preparation for treating the hair consists of a container 10 for containing a mousse, a closure 11 for retaining the contents of the container 10, and a spreading means in the form of a comb 12 on the closure 11. More particularly, the container 10 is made of a flexible plastics material, or of a soft alloy, so that the contents or mousse can be discharged readily on squeezing by hand pressure. The closure 11 is a moulding of a plastics material and, as can be seen in Fig. 2 is engaged with the container 10 by means of screw-threads 13 and a sealing ring 14. The closure 11 has an interior passage 15 terminating at a nozzle 16 the outlet of which is temporarily closed by means of a break-off seal 17. The comb 12 is formed integrally with the closure 11 using a conventional moulding technique. In use of the appliances in Figs. 1 and 2, the seal 17 is removed by breaking or cutting, and the preparation discharged from the appliance by squeezing the container 10. The hair treatment preparation

may be applied directly to the hair or first dispensed to the free hand of the user. Immediately, the mousse or preparation may be spread through the hair by use of the comb 12.

In a modification of the spreading means (comb 12) of Figs. 1 and 2, the spreading means may take the form of moulded bristles.

In Fig. 3, the appliance is generally similar to that of Figs. 1 and 2, but the spreading means takes the form of a comb configuration 12A of which each tooth is a discharge or a dispensing nozzle. Thus, in the use of this modification, the hair treatment preparation is preferably applied directly to the hair simultaneously with the spreading or combing action. In Fig. 3, parts corresponding with those in Figs. 1 and 2 are given the same reference numerals as used in Figs. 1 and 2.

In Figs. 4 and 5, parts corresponding with those in the previous figures are given in the same reference numerals. In this embodiment, the closure 11 consists of a cap of generally cylindrical form and having a spreading means in the form of a diametrically disposed row of bristles 12B formed integrally with the cap. As can be seen in Fig. 4, the cap has a plane outer skirt portion 18 and a threaded inner wall having the screw threads 13. An annular seal 14A is formed integrally with the cap and engages the mouth of the container 10 after discarding of a sealing disc (not shown) for isolating the contents of the container 10 from the cap prior to use.

In this embodiment, the cap has a row of nozzle holes 19 which have outlets disposed adjacent root portions of the bristles 12B so that in use the hair treatment preparation is discharged adjacent the root portions of the bristles 12B and simultaneously spread through the hair by a brushing action. With this embodiment, the provision of the wider diameter skirt portion 18 conveniently accommodates a relatively long row of bristles 12B, and the disposing of the discharge nozzles 19 generally centrally adjacent the root portions of the bristles achieves good control of the spreading of the hair treatment preparation.

In a modification of the embodiment shown in Figs. 4 and 5, the pattern of the bristles 12B is defined by arranging the bristles in circular arrays; and the discharge nozzle 19 also in a circular pattern.

In a further modification of the embodiment shown in Figs. 4 and 5, the outlets of the discharge nozzles 19 are disposed close to the roots of some of the bristles 12B, and these ones of the bristles are provided with a longitudinally extending groove serving to assist in the conducting of hair treatment preparation from the nozzle outlet along the length of the bristle.

In a modification of any of the embodiments described above, some of the bristle or comb teeth may be manufactured independently of

the closure item and from a porous plastics material such as for example is used in the manufacture of plastics filters. Such a porous material would conduct liquid hair treatment preparation along a bristle or comb tooth by capillary action. In this modification, these porous bristles would be inserted through the closure member so that the inner end portions of these bristles could feed on the hair treatment preparation and conduct same outwards for dispensing by wiping from the surface of the bristle or comb tooth during movement of the appliance through the hair. This modification is of interest in providing a means of dispensing hair treatment preparation in a more controlled manner dependent upon the "particle size" of the porous plastics material from which the dispensing bristles or comb teeth were made.

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#### CLAIMS

1. An appliance for use in dispensing a preparation for treating the hair, comprising a container for holding the preparation, a closure on the container closing same to retain the preparation, and spreading means on the container or on the closure for spreading a preparation through the hair
2. An appliance as claimed in claim 1, wherein the spreading means comprises comb teeth or bristles.
3. An appliance as claimed in claim 1 or 2, wherein the enclosure engages the container by means of screw-threads.
4. An appliance as claimed in any one of the preceding claims, wherein the closure incorporates means defining a discharge or dispensing nozzle for dispensing or discharging said preparation in use of the appliance.
5. An appliance as claimed in claim 4, wherein the said means defining a discharge or dispensing nozzle comprises a duct through said spreading means.
6. An appliance as claimed in claim 4, wherein the said means defining a discharge or dispensing nozzle comprises a duct having an outlet disposed adjacent a root portion of said spreading means.
7. An appliance as claimed in claim 6, wherein a spreading means adjacent the outlet of a dispensing nozzle is provided with a groove or channel for carrying a liquid preparation therealong.
8. An appliance as claimed in any one of claims 1 to 3, wherein at least some of the said spreading means comprises a porous material in communication with the interior of the container whereby, in use, a preparation for treating the hair is conducted from the interior of the container through the porous spreading means by capillary action and dispensed from an outer surface of the porous spreading means.
9. An appliance for use in dispensing a preparation for treating the hair, substantially

as hereinbefore described with reference to and as shown in Fig. 1 or Fig. 2 or Fig. 3 or Figs. 4 and 5 of the accompanying drawings.

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